10/539754



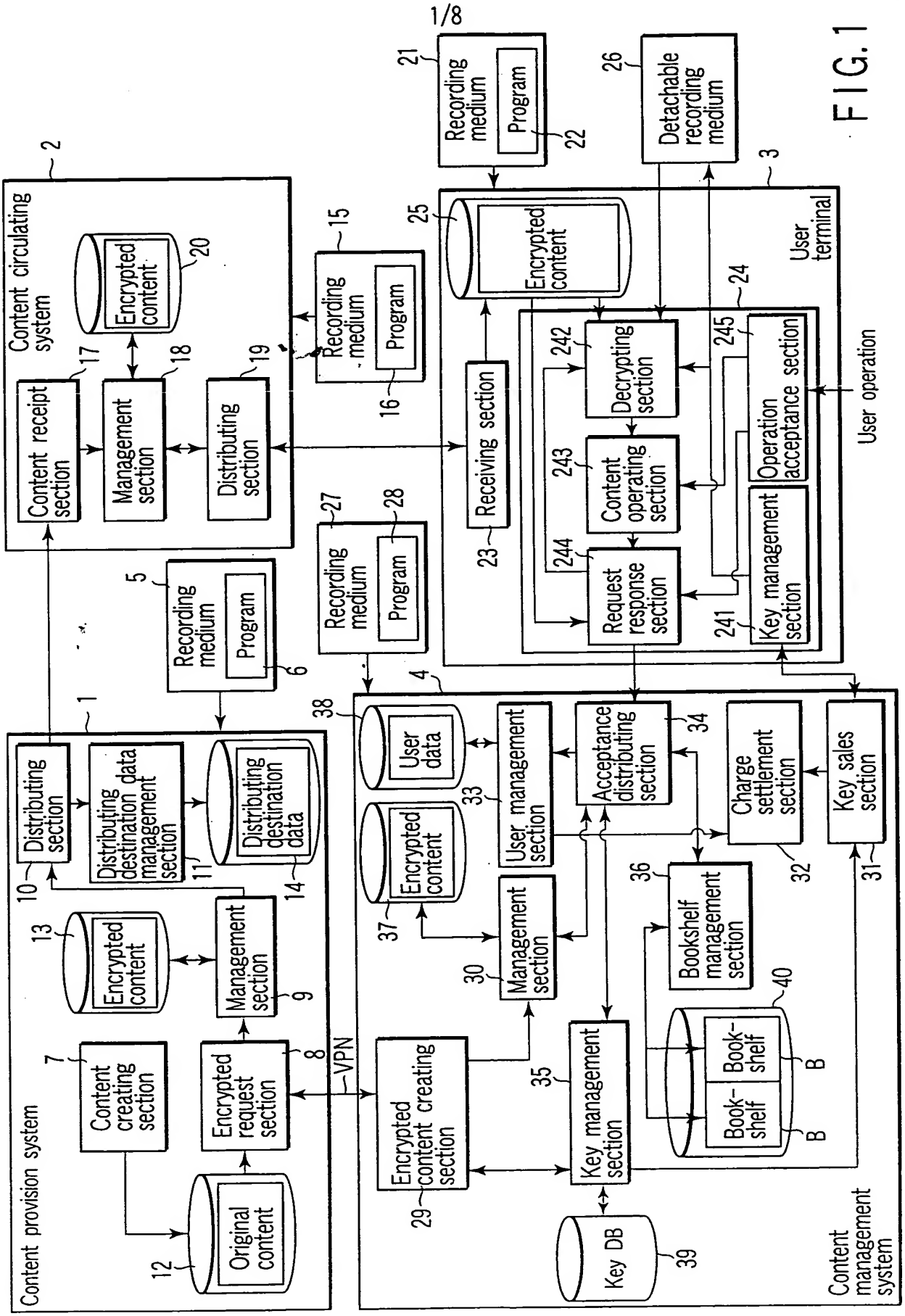


FIG. 1

| User data | | |
|---|---|---|
| User ID | A | |
| Password | | |
| Purchase history dara | Purchase content ID | ----- |
| | Date | ----- |
| Charge data | | |

FIG. 2

13

| Bookshelf | | |
|---|---|---|
| User ID | A | |
| Content ID or Storage content ID | 0001 | |
| Content | NULL | |
| Content URL | NULL | |
| Content Link | 0080010 | |
| Content provider ID | 1 | |
| ⋮ | ⋮ | |

FIG. 4

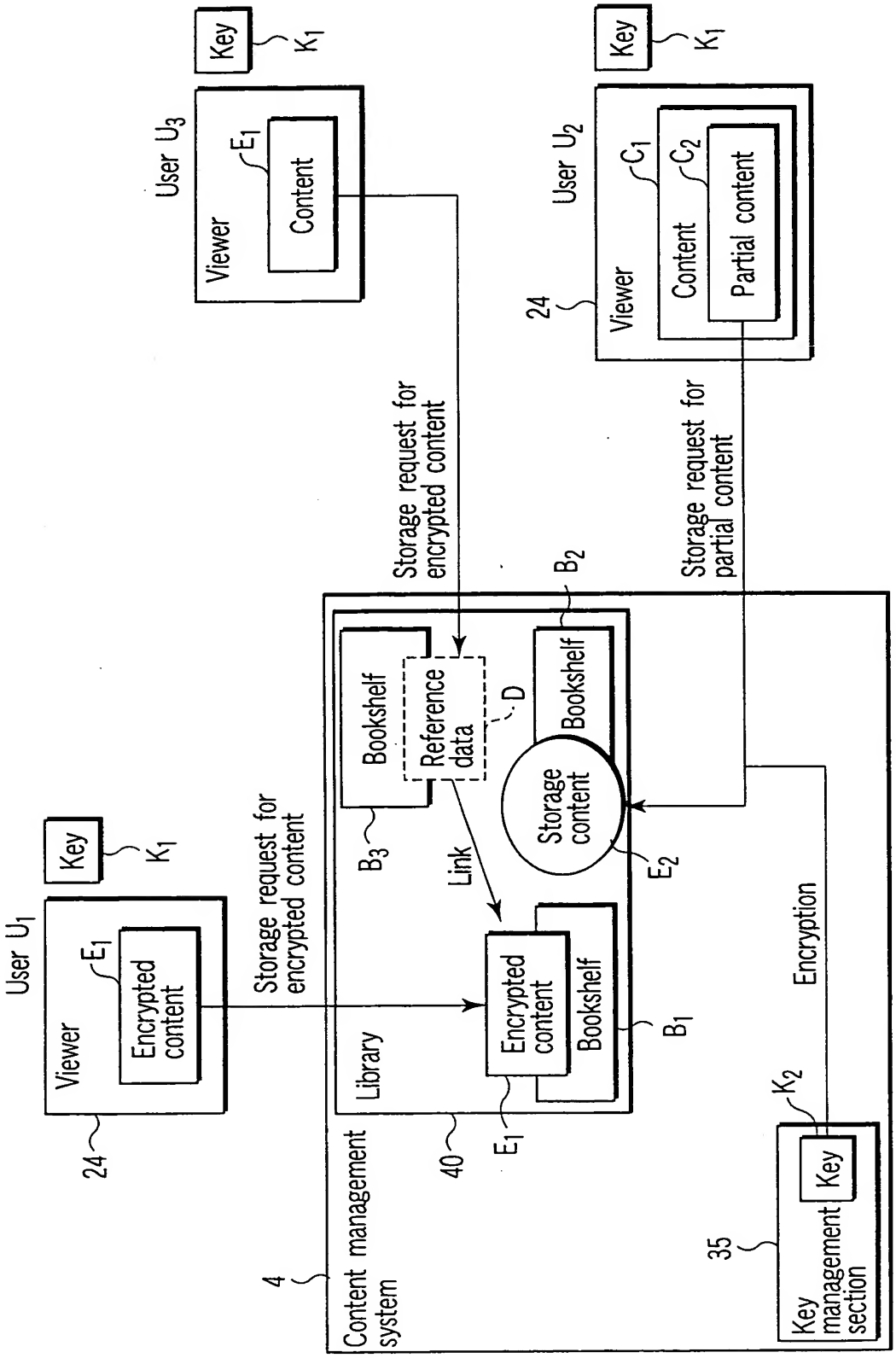
Key
$K_1$
User $U_3$
Viewer
$E_1$
Content
Key
$K_1$
User $U_2$
$C_1$
$C_2$
Content
Partial content
24
Viewer
Storage request for encrypted content
Storage request for partial content
$B_2$
Bookshelf
Reference data
D
Bookshelf
$B_3$
Link
Storage content
$E_2$
Key
$K_1$
User $U_1$
$E_1$
Encrypted content
Storage request for encrypted content
Encrypted content
Bookshelf
$B_1$
Encryption
Library
24
40
$E_1$
$K_2$
Key
35
Key management section
4
Content management system

FIG. 3

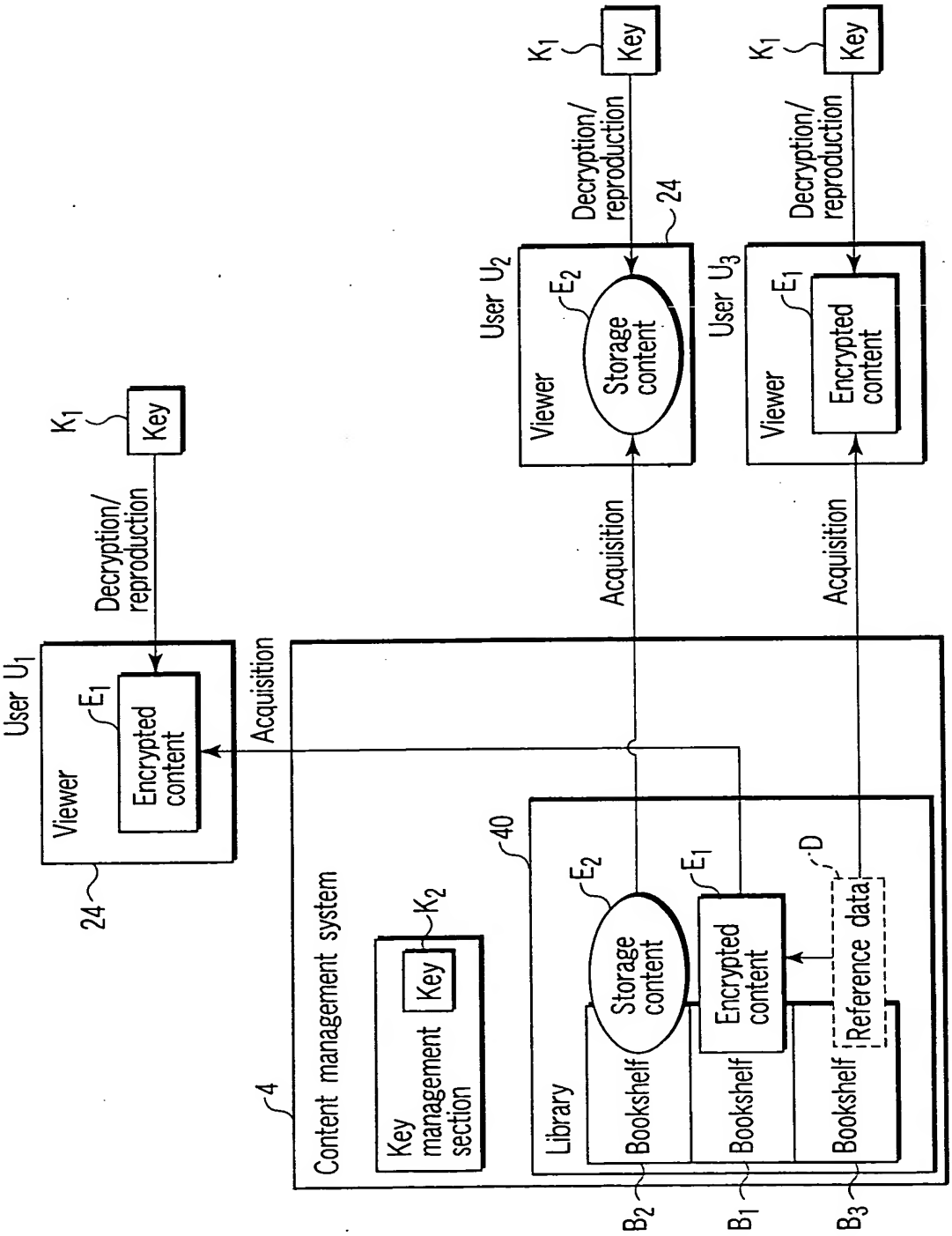
User U1
Viewer
E1
Encrypted content
24
K1
Key
Decryption/ reproduction
Acquisition
4
Content management system
Key management section
K2
Key
40
Library
Bookshelf
Storage content
E2
Encrypted content
E1
Reference data
D
B2
B1
B3
User U2
Viewer
Storage content
E2
User U3
Viewer
Encrypted content
E1

FIG. 5

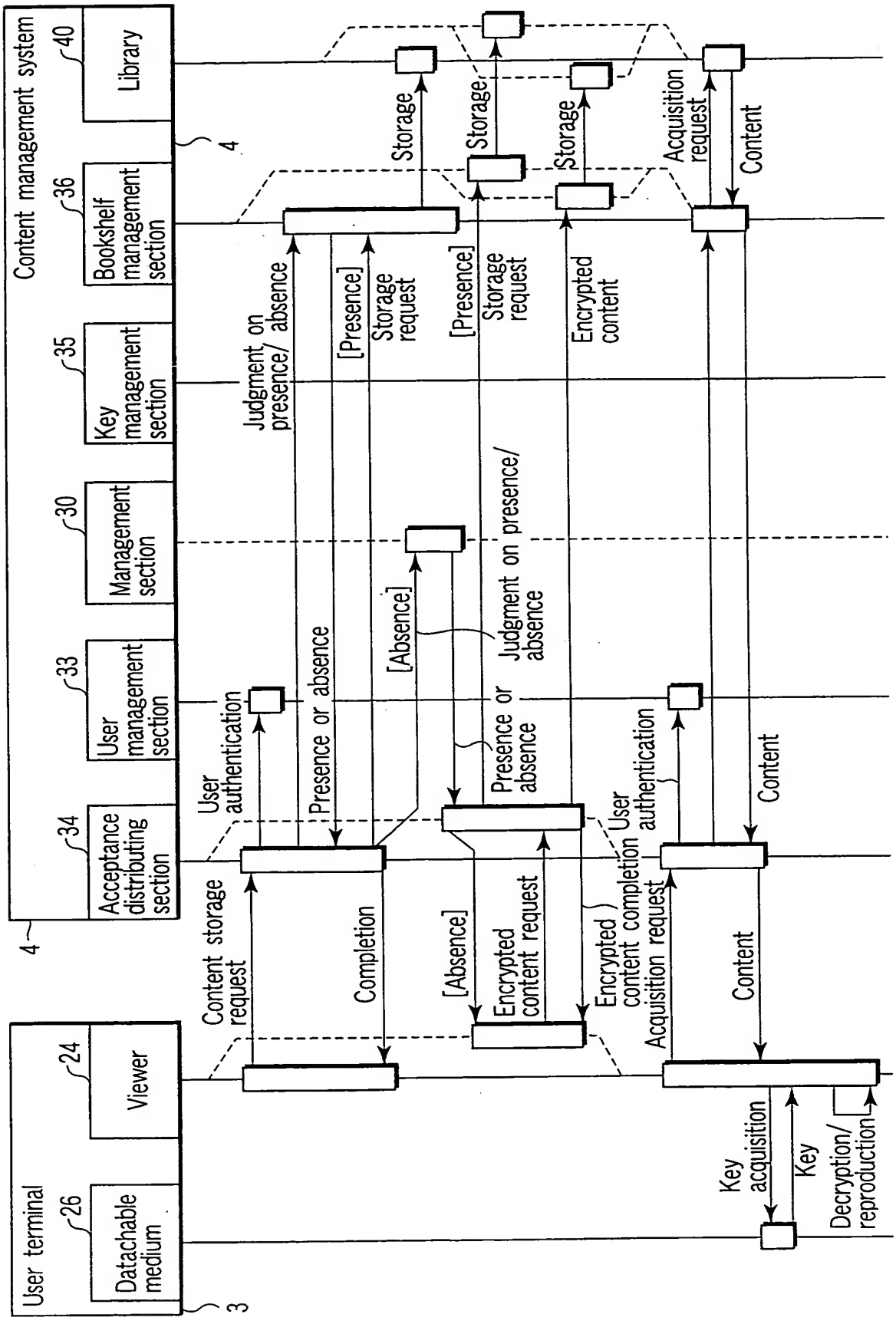
Content management system
4
Library
40
Bookshelf management section
36
Key management section
35
Management section
30
User management section
33
Acceptance distributing section
34
User terminal
3
Datachable medium
26
Viewer
24
Storage
Storage
Storage
Acquisition request
Content
Judgment on presence/ absence
[Presence]
Storage request
[Presence]
Storage request
Encrypted content
[Absence]
Judgment on presence/ absence
User authentication
Presence or absence
Presence or absence
User authentication
Content
Content storage request
Completion
[Absence]
Encrypted content request
Encrypted content completion
Acquisition request
Content
Key acquisition
Key
Decryption/ reproduction

FIG. 6

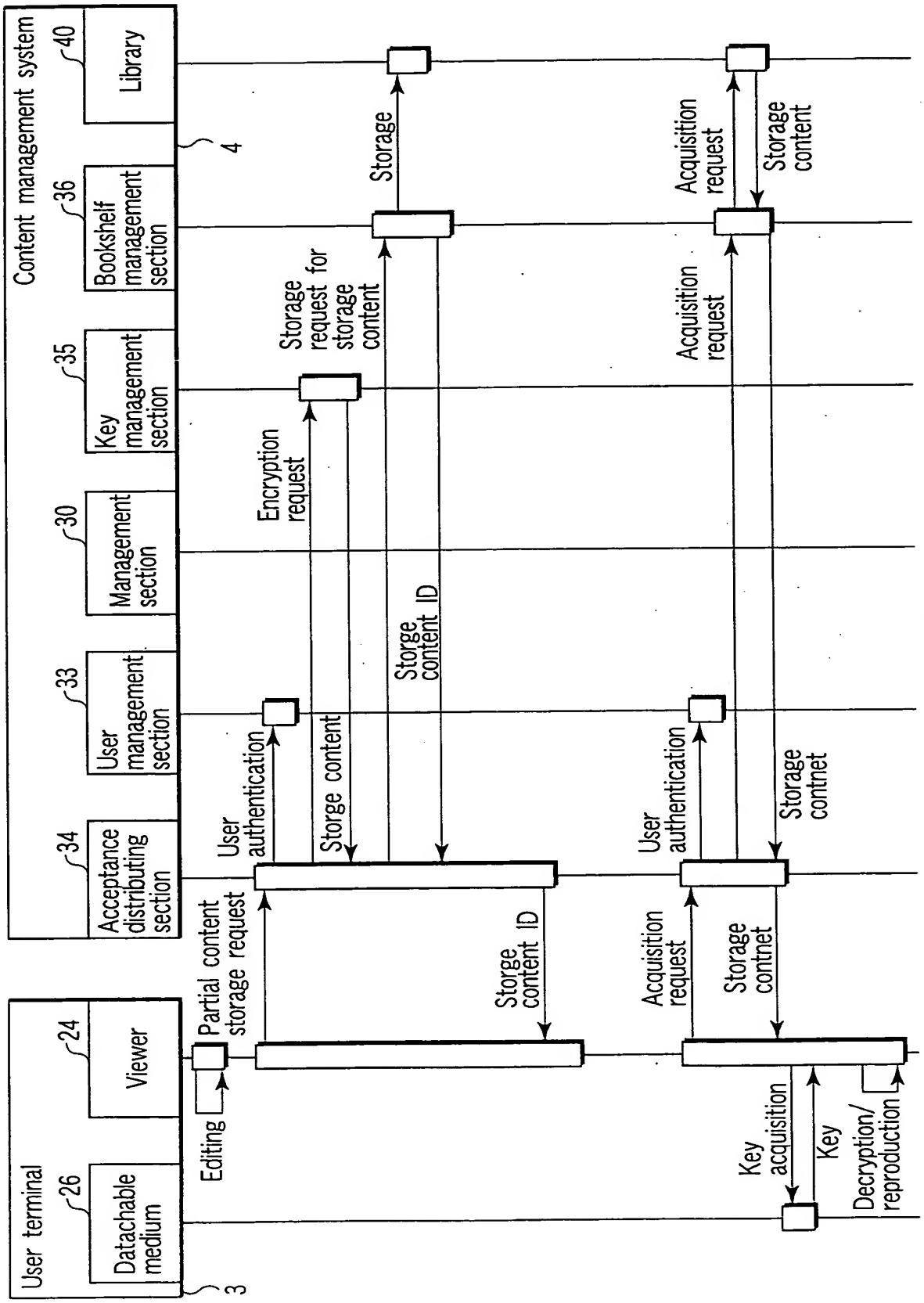
Content management system
40 Library
36 Bookshelf management section
35 Key management section
30 Management section
33 User management section
34 Acceptance distributing section
4
User terminal
24 Viewer
26 Datachable medium
3
Storage
Acquisition request
Storage content
Storage request for storage content
Encryption request
Storge content ID
User authentication
Storge content
Partial content storage request
Storge content ID
Editing
User authentication
Storage contnet
Acquisition request
Storage contnet
Key acquisition
Key
Decryption/ reproduction

FIG. 7

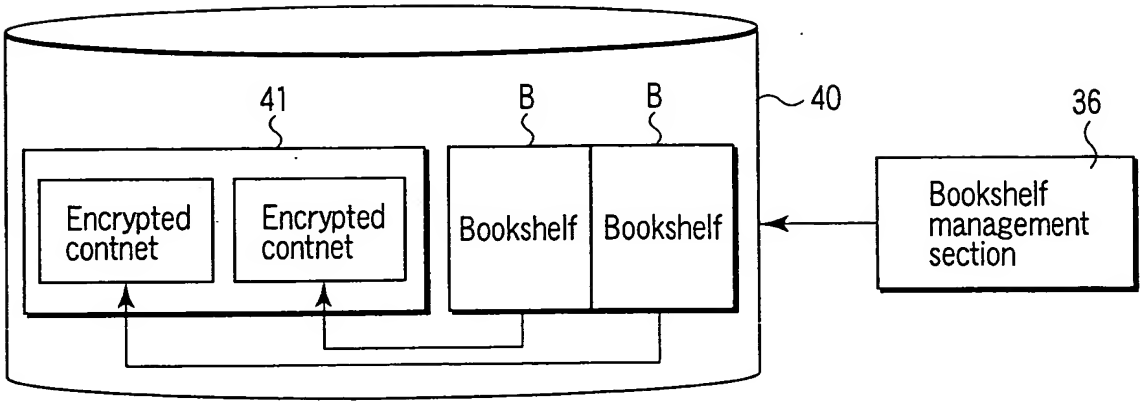
41
B
B
40
36
Encrypted contnet
Encrypted contnet
Bookshelf
Bookshelf
Bookshelf management section

FIG. 8

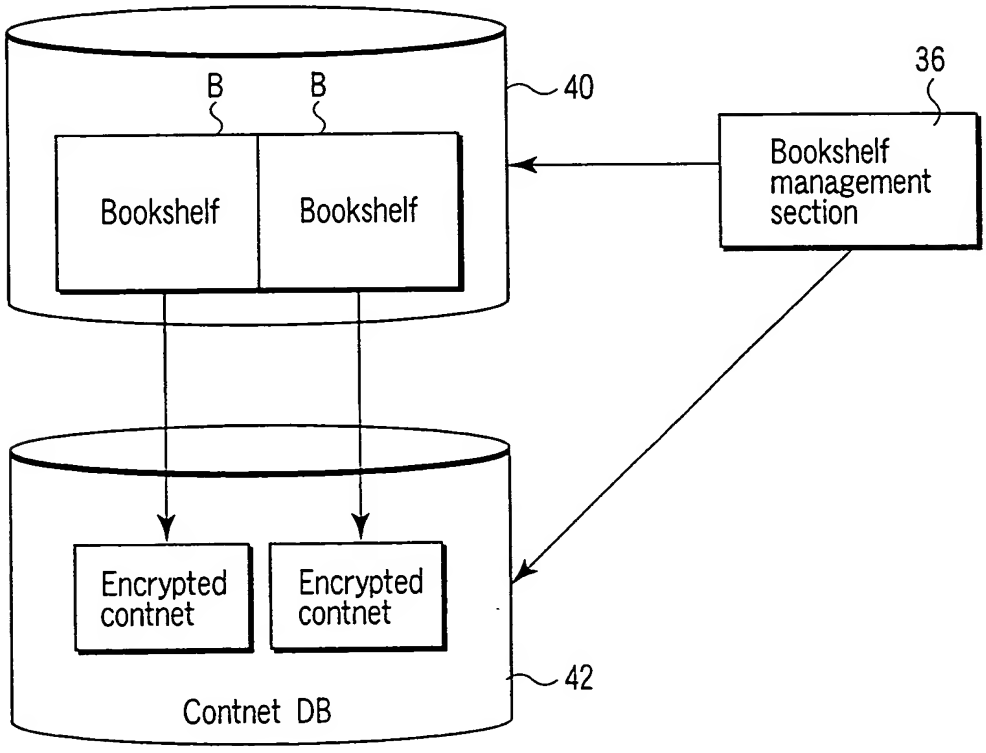
B
B
40
36
Bookshelf
Bookshelf
Bookshelf management section
Encrypted contnet
Encrypted contnet
42
Contnet DB

FIG. 9

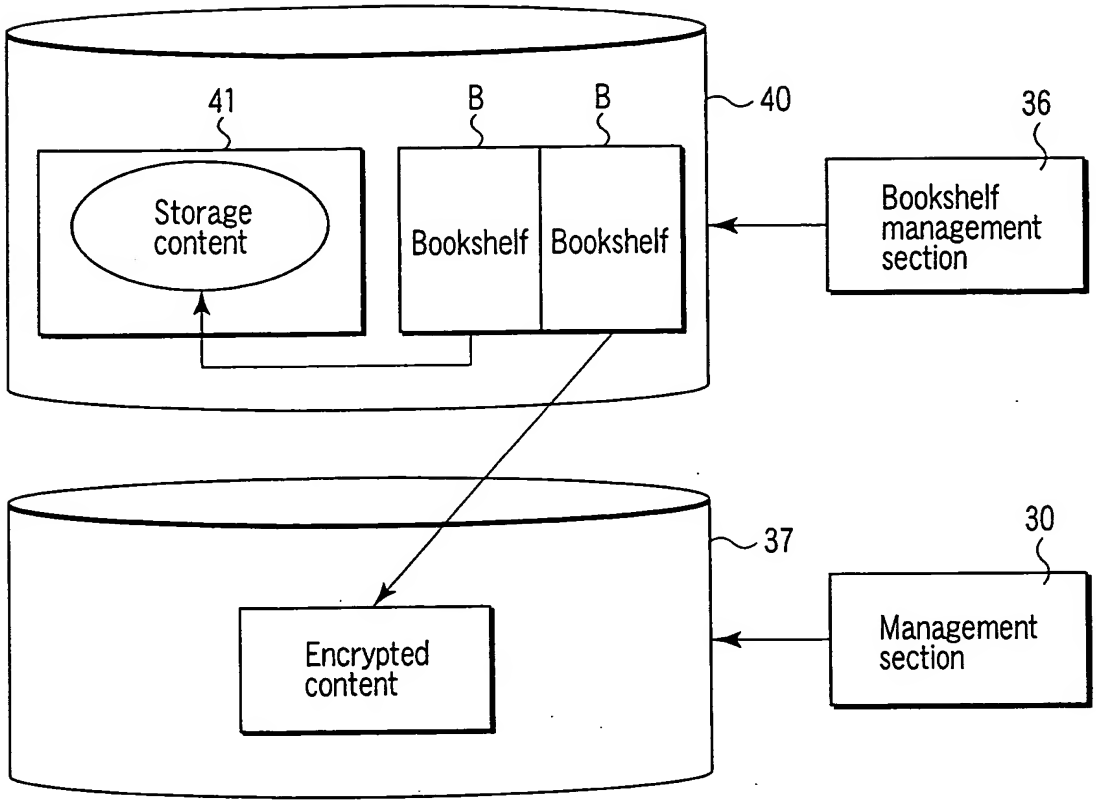
41
B
B
40
36
Storage content
Bookshelf
Bookshelf
Bookshelf management section
37
30
Encrypted content
Management section

FIG. 10

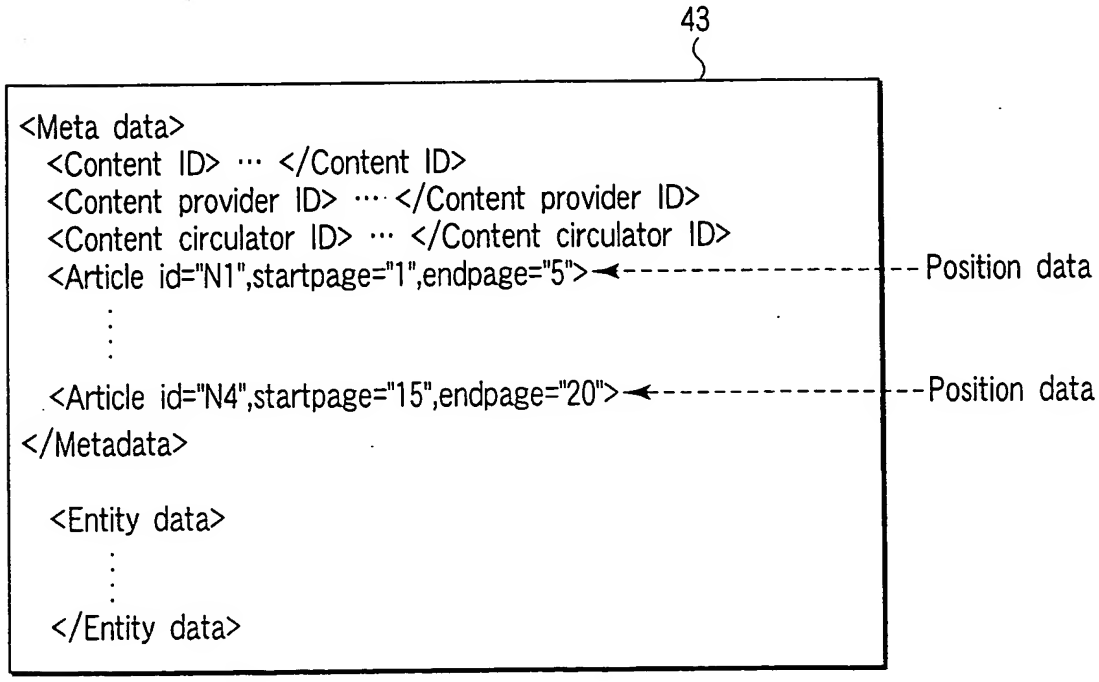
43
<Meta data>
<Content ID> ··· </Content ID>
<Content provider ID> ··· </Content provider ID>
<Content circulator ID> ··· </Content circulator ID>
<Article id="N1",startpage="1",endpage="5">
Position data
<Article id="N4",startpage="15",endpage="20">
Position data
</Metadata>
<Entity data>
</Entity data>

FIG. 11